

WHAT IS CLAIMED IS:

Sub B1) 1. An information recording medium on which are recorded substantial data and reproduce control information for reproducing the substantial data, wherein

5 the reproduce control information comprises:

first reproduce control information required for reproducing the substantial data in all available reproduce patterns; and

10 second reproduce control information required for reproducing the substantial data in a part of all the available reproduce patterns.

2. The information recording medium as defined in Claim 1, wherein

15 the substantial data are divided into one or a plurality of tracks and are defined as one or a plurality of titles, each corresponding to a logical set comprising one or the plurality of tracks;

20 the first reproduce control information is recorded on a per-title basis so as to spread over the information recording medium; and

25 the second reproduce control information corresponds to reproduce control information items about the tracks recorded on the information recording medium being collectively recorded in a predetermined location of a program area.

3. The information recording medium as defined in Claim  
2, wherein

the tracks comprise:

5 tracks to be reproduced in all the reproduce  
patterns; and

tracks to be reproduced in only a portion of  
the reproduce patterns.

4. The information recording medium as defined in Claim  
10 2, wherein

the first reproduce control information corresponds to  
reproduce control information used in an information  
reproducing apparatus capable of reproducing all the tracks;  
and

15 the second reproduce control information corresponds  
to reproduce control information used with an information  
reproducing apparatus capable of reproducing a portion of the  
tracks.

20 5. The information recording medium as defined in Claim  
1, wherein

the first reproduce control information corresponds to  
reproduce control information used with an information  
reproducing apparatus capable of reproducing the substantial  
25 data in all the available reproduce patterns; and

the second reproduce control information corresponds  
to reproduce control information used with an information  
reproducing apparatus capable of reproducing the substantial

data in a portion of the reproduce patterns.

6. The information recording medium as defined in Claim 2, wherein

5 the second reproduce control information comprises at least address information, attribute information, and reproduce times relating to the tracks.

7. The information recording medium as defined in Claim 2, wherein

10 the program area comprises an audio zone in which the substantial data chiefly comprise audio data; and

the second reproduce control information is recorded at the head of the audio zone.

8. The information recording medium as defined in Claim 2, wherein

the program area comprises an audio zone in which the substantial data chiefly comprise audio data, and a video zone

20 in which the substantial data chiefly comprise video data; and

the second reproduce control information is recorded at the head of the audio zone.

9. An information reproducing apparatus for reproducing  
25 an information recording medium on which are recorded substantial data, first reproduce control information required for reproducing the substantial data in all available reproduce patterns, and second reproduce control information required for

reproducing the substantial data in a portion of the available  
reproduce patterns,

said player comprising:

reading means for reading information from the  
5 information recording medium; and

reproduce processing means capable of reproducing the  
substantial data in a portion of the available reproduce  
patterns, wherein

said reproduce processing means acquires the second  
10 reproduce control information prior to any of the substantial  
data, stores the thus-acquired second reproduce control  
information into storage means, and plays back the substantial  
data on the basis of the second reproduce control information.

15 10. The player as defined in Claim 9, wherein  
the substantial data are divided into one or a plurality  
of tracks and are defined as one or a plurality of titles, each  
corresponding to a logical set comprising one or the plurality  
of tracks;

20 the player further comprises means for specifying a  
track to be reproduced; and

the reproduce processing means acquires information  
relating to the thus-specified track from the second reproduce  
control information stored in the storage means.

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11. A signal embodied in a carrier wave comprising:  
substantial data to be reproduced independently of  
one another, and

reproduce control information for reproducing the  
5 substantial data, the reproduce control information  
comprising;

first reproduce control information required  
for reproducing the substantial data in all available reproduce  
patterns; and

10 second reproduce control information required  
for reproducing the substantial data in a part of all the  
available reproduce patterns.

12. The signal as defined in Claim 11, wherein  
15 the substantial data are divided into one or a plurality  
of tracks and are defined as one or a plurality of titles, each  
corresponding to a logical set comprising one or the plurality  
of tracks;

the first reproduce control information is recorded on  
20 a per-title basis so as to spread over the information recording  
medium; and

the second reproduce control information corresponds  
to reproduce control information items about the tracks  
recorded on the information recording medium being collectively  
25 recorded in a predetermined location of a program area.

13. The signal as defined in Claim 12, wherein  
the tracks comprise:

tracks to be reproduced in all the reproduce  
patterns; and

5 tracks to be reproduced in only a portion of  
the reproduce patterns.

14. The signal as defined in Claim 12, wherein

the first reproduce control information corresponds to  
10 reproduce control information used in an information  
reproducing apparatus capable of reproducing all the tracks;  
and

the second reproduce control information corresponds  
to reproduce control information used with an information  
15 reproducing apparatus capable of reproducing a portion of the  
tracks.

15. The signal as defined in Claim 11, wherein

the first reproduce control information corresponds to  
20 reproduce control information used with an information  
reproducing apparatus capable of reproducing the substantial  
data in all the available reproduce patterns; and

the second reproduce control information corresponds  
to reproduce control information used with an information  
25 reproducing apparatus capable of reproducing the substantial  
data in a portion of the reproduce patterns.

16. The signal as defined in Claim 12, wherein

the second reproduce control information comprises at least address information, attribute information, and reproduce times relating to the tracks.

5 17. The signal as defined in Claim 12, wherein the program area comprises an audio zone in which the substantial data chiefly comprise audio data; and the second reproduce control information is recorded at the head of the audio zone.

10 18. The signal as defined in Claim 12, wherein the program area comprises an audio zone in which the substantial data chiefly comprise audio data, and a video zone in which the substantial data chiefly comprise video data; and  
15 the second reproduce control information is recorded at the head of the audio zone.

APP B4  
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